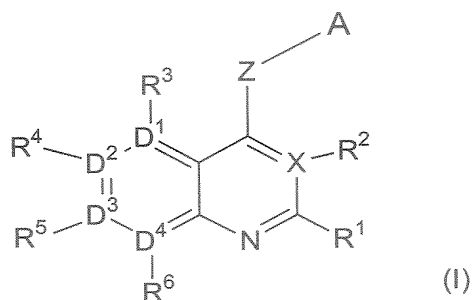


AMENDMENTS TO THE CLAIMS

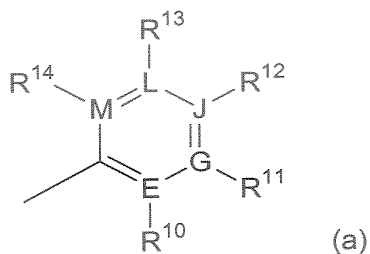
Please cancel claims 117-121 and 130-135 in their entirety without prejudice, amend claims 5-8, 10, 12-15, 17, 20, 23, 27-29, 32-34, 36, 37, 39-43, 46, 47, 49, 51-53, 55, 58, 70-72, 74-76, 80, 82, 85, 88-95, 98-100, 102, 104, 106, 108-111, 113, 116, 122, 123, 127 and 129, and add new claims 136-144, as follows:

Claim 1 (Original) A compound of formula (I) or a pharmaceutically acceptable salt or solvate thereof:



wherein

A represents a group of formula (a):



Z represents -O-, -N(-R<sup>Z</sup>)-, -S-, or -C(=O)- wherein R<sup>Z</sup> represents a hydrogen atom or unsubstituted C1-4 alkyl,

D<sup>1</sup>, D<sup>2</sup>, D<sup>3</sup>, D<sup>4</sup>, X, E, G, J, L, and M, which may be the same or different, represent C or N,

R<sup>1</sup> to R<sup>6</sup> and R<sup>10</sup> to R<sup>14</sup>, which may be the same or different, represent

- (1) a hydrogen atom;
- (2) a halogen atom;
- (3) hydroxyl;
- (4) cyano group;
- (5) nitro group;
- (6) C1-6 alkyl;
- (7) C2-6 alkenyl;
- (8) C2-6 alkynyl;
- (9) C1-6 alkoxy;
- (10) C1-6 alkylthio;

wherein (6) C1-6 alkyl, (7) C2-6 alkenyl, (8) C2-6 alkynyl, (9) C1-6 alkoxy, and (10) C1-6 alkylthio are optionally substituted by

- (I) hydroxyl,
- (II) a halogen atom,
- (III) C1-4 alkoxy,
- (IV) an oxygen atom,
- (V) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group wherein the carbocyclic or heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, a halogen atom, or a five- or six-membered carbocyclic or heterocyclic group, and the C1-4 alkyl group is optionally substituted by hydroxyl or phenyl,
- (VI) amino group wherein one or two hydrogen atoms in the amino group are optionally substituted by C1-4 alkyl or a five- or six-membered carbocyclic or heterocyclic group, and the C1-4 alkyl group is optionally substituted by hydroxyl or C1-4 alkoxy,

(VII) -NHCONHR<sup>VII</sup> wherein R<sup>VII</sup> represents C1-4 alkyl,

(VIII) -OCOR<sup>VIII</sup> wherein R<sup>VIII</sup> represents C1-6 alkyl optionally substituted by amino, or

(IX) -NSO<sub>2</sub>R<sup>IX</sup> wherein R<sup>IX</sup> represents C1-4 alkyl;

(11) -NR<sup>a</sup>R<sup>b</sup>;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

wherein, in groups (11) to (13), R<sup>a</sup>, R<sup>b</sup>, R<sup>c</sup>, R<sup>d</sup>, and R<sup>e</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and the C1-4 alkyl group is optionally substituted by

(a) hydroxyl,

(b) a halogen atom,

(c) C1-4 alkoxy,

(d) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or

(e) amino group wherein one or two hydrogen atoms in the amino group are optionally substituted by C1-4 alkyl, and

R<sup>d</sup> and R<sup>e</sup> together may combine with the carbon atoms to which they are attached represent a saturated three- to nine-membered heterocyclic group, and the heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom or may contain one or more additional heteroatoms;

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group;

(16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group;

(17) -OCOR<sup>k</sup> wherein R<sup>k</sup> represents C1-4 alkyl; or

(18)  $-\text{OSO}_2\text{R}^{\text{L}}$  wherein  $\text{R}^{\text{L}}$  represents C1-4 alkyl,

wherein (14) carbocyclic group, (15) heterocyclic group, and (16) bicyclic carbocyclic or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino group are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi)  $-\text{CO}-\text{OR}^{\text{f}}$ , or (xii)  $-\text{CO}-\text{NR}^{\text{g}}\text{R}^{\text{h}}$  wherein  $\text{R}^{\text{f}}$ ,  $\text{R}^{\text{g}}$ , and  $\text{R}^{\text{h}}$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and

$\text{R}^{10}$  and  $\text{R}^{11}$ ,  $\text{R}^{11}$  and  $\text{R}^{12}$ ,  $\text{R}^{12}$  and  $\text{R}^{13}$ , and  $\text{R}^{13}$  and  $\text{R}^{14}$  together may combine with the carbon atoms to which they are attached represent a saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group, and the carbocyclic or heterocyclic group is optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi)  $-\text{CO}-\text{OR}^{\text{f}}$ , or (xii)  $-\text{CO}-\text{NR}^{\text{g}}\text{R}^{\text{h}}$  wherein  $\text{R}^{\text{f}}$ ,  $\text{R}^{\text{g}}$ , and  $\text{R}^{\text{h}}$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl,

provided that, when  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{D}^3$ ,  $\text{D}^4$ , X, E, G, J, L, and M represent a nitrogen atom, groups  $\text{R}^2$  to  $\text{R}^6$  and  $\text{R}^{10}$  to  $\text{R}^{14}$  which attach to the nitrogen atom are absent, and

provided that, when all of  $\text{D}^1$ ,  $\text{D}^2$ ,  $\text{D}^3$ , and  $\text{D}^4$  represent a carbon atom,

I) at least one of  $\text{R}^4$  and  $\text{R}^5$  represents (4) cyano group, (5) nitro group, (12)  $-\text{CO}-\text{OR}^{\text{c}}$ , (13)  $-\text{CO}-\text{NR}^{\text{d}}\text{R}^{\text{e}}$  wherein any one of  $\text{R}^{\text{d}}$  and  $\text{R}^{\text{e}}$  represents optionally substituted C1-4 alkyl, (14) carbocyclic group, (15) heterocyclic group wherein the heterocyclic group contains at least one substituent, or (16) bicyclic carbocyclic group or heterocyclic group, or

II) L represents a nitrogen atom, E, G, J, and M represent a carbon atom, R<sup>10</sup> represents a hydrogen atom, and R<sup>14</sup> represents (6) C1-6 alkyl group, (14) carbocyclic group, (15) heterocyclic group, or (16) bicyclic carbocyclic group or heterocyclic group.

Claim 2 (Original) The compound according to claim 1, wherein at least one of D<sup>1</sup> to D<sup>4</sup> represents a nitrogen atom.

Claim 3 (Original) The compound according to claim 1, wherein D<sup>1</sup> represents a nitrogen atom and, at the same time, all of D<sup>2</sup> to D<sup>4</sup> represent a carbon atom.

Claim 4 (Original) The compound according to claim 1, wherein D<sup>2</sup> represents a nitrogen atom and, at the same time, all of D<sup>1</sup>, D<sup>3</sup>, and D<sup>4</sup> represent a carbon atom.

Claim 5 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 4~~, wherein, in the group of formula (a), any one of E, G, J, L, and M represents a nitrogen atom and all the others represent a carbon atom.

Claim 6 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 4~~, wherein L represents a nitrogen atom and E, G, J, and M represent a carbon atom.

Claim 7 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 6~~, wherein

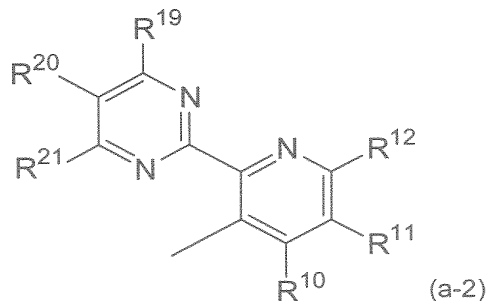
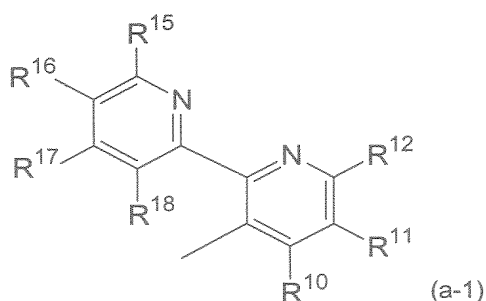
R<sup>10</sup> represents a hydrogen atom, and

$R^{11}$  and  $R^{12}$  are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 8 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 7~~, wherein  $R^{14}$  represents an optionally substituted saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group.

Claim 9 (Original) The compound according to claim 8, wherein  $R^{14}$  represents an optionally substituted unsaturated six-membered heterocyclic group.

Claim 10 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 9~~, wherein A represents a group of formula (a-1) or (a-2):



wherein

$R^{10}$  to  $R^{12}$  are as previously defined ~~in claim 1~~, and

$R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$ , which may be the same or different, represent (0) a hydrogen atom, (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi)  $-\text{CO}-\text{OR}^f$ , or (xii)  $-\text{CO}-\text{NR}^g\text{R}^h$  wherein  $R^f$ ,  $R^g$ , and  $R^h$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

Claim 11 (Original) The compound according to claim 10, wherein, in the group of formula (a-1) or (a-2),  $R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$  are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 12 (Currently Amended) The compound according to claim 10 ~~or 11~~, wherein  
 $R^{10}$  represents a hydrogen atom,  
 $R^{11}$  and  $R^{12}$  are selected from the group consisting of a hydrogen atom and C1-4 alkyl,  
and  
 $R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$  in the group of formula (a-1) or (a-2) are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 13 (Currently Amended) The compound according to claim 10 ~~or 11~~, wherein  
 $R^{10}$  represents a hydrogen atom,  
 $R^{11}$  and  $R^{12}$  are selected from the group consisting of a hydrogen atom and C1-4 alkyl,  
and  
all of  $R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$  in the group of formula (a-1) or (a-2) represent a hydrogen atom.

Claim 14 (Currently Amended) The compound according to claim 12 ~~or 13~~, wherein  
Z represents -O-, X represents a carbon atom, and  $R^1$  to  $R^3$  and  $R^6$  represent a hydrogen atom.

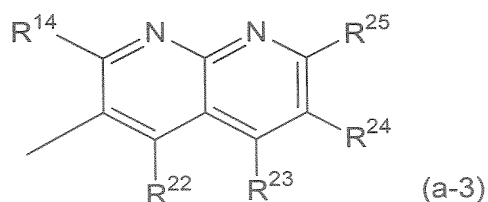
Claim 15 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 6~~, wherein

$R^{10}$  represents a hydrogen atom, and

$R^{11}$  and  $R^{12}$  together combine with the carbon atoms to which they are attached represent a saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group.

Claim 16 (Original) The compound according to claim 15, wherein  $R^{11}$  and  $R^{12}$  together combine with the carbon atoms to which they are attached represent a unsaturated six-membered carbocyclic or heterocyclic group.

Claim 17 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 4~~, wherein A represents a group of formula (a-3):



wherein

$R^{14}$  is as previously defined ~~in claim 1~~, and

$R^{22}$  to  $R^{25}$ , which may be the same or different, represent (i) a hydrogen atom, (ii) hydroxyl, (iii) a halogen atom, (iv) cyano group, (v) nitro group, (vi) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vii) C1-4 alkyl, (viii) C2-4 alkenyl, (ix) C2-4 alkynyl, (x) C1-4 alkoxy, (xi) C1-4 alkylthio, (xii)  $-CO-OR^f$ , or (xiii)  $-CO-NR^gR^h$  wherein  $R^f$ ,  $R^g$ , and  $R^h$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl).

Claim 18 (Original) The compound according to claim 17, wherein  $R^{22}$  to  $R^{25}$  in the group of formula (a-3) are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 19 (Original) The compound according to claim 17, wherein all of R<sup>22</sup> to R<sup>25</sup> in the group of formula (a-3) represent a hydrogen atom.

Claim 20 (Currently Amended) The compound according to claim 17 ~~any one of claims 17 to 19~~, wherein

R<sup>14</sup> represents

optionally substituted C1-4 alkyl,

an optionally substituted saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group, or

an optionally substituted bicyclic saturated or unsaturated nine- or ten-membered carbocyclic or heterocyclic group.

Claim 21 (Original) The compound according to claim 20, wherein R<sup>14</sup> represents unsubstituted C1-4 alkyl.

Claim 22 (Original) The compound according to claim 20, wherein R<sup>14</sup> represents an optionally substituted unsaturated six-membered carbocyclic or heterocyclic group.

Claim 23 (Currently Amended) The compound according to claim 2 ~~any one of claims 2 to 22~~, wherein X represents a carbon atom and both R<sup>1</sup> and R<sup>2</sup> represent a hydrogen atom.

Claim 24 (Original) The compound according to claim 23, wherein

D<sup>1</sup> represents a nitrogen atom and all of D<sup>2</sup> to D<sup>4</sup> represent a carbon atom, and

R<sup>6</sup> represents a hydrogen atom.

Claim 25 (Original) The compound according to claim 23, wherein

D<sup>2</sup> represents a nitrogen atom and all of D<sup>1</sup>, D<sup>3</sup>, and D<sup>4</sup> represent a carbon atom, and  
R<sup>3</sup> represents a hydrogen atom or a halogen atom, and R<sup>6</sup> represents a hydrogen atom.

Claim 26 (Original) The compound according to claim 23, wherein all of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>  
and R<sup>6</sup> represent a hydrogen atom.

Claim 27 (Currently Amended) The compound according to claim 2 ~~any one of~~  
~~claims 2 to 26~~, wherein

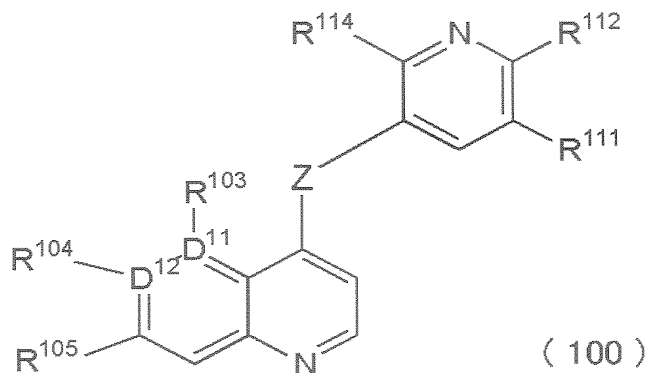
R<sup>4</sup> and R<sup>5</sup>, which may be the same or different, represent

- (1) a hydrogen atom;
- (2) a halogen atom;
- (3) hydroxyl;
- (6) C1-6 alkyl;
- (9) C1-6 alkoxy;
- (12) -CO-OR<sup>c</sup>;
- (13) -CO-NR<sup>d</sup>R<sup>c</sup>;
- (14) a saturated or unsaturated three- to nine-membered carbocyclic group;
- (15) a saturated or unsaturated three- to nine-membered heterocyclic group;
- (16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic  
or heterocyclic group;
- (17) -OCOR<sup>k</sup> wherein R<sup>k</sup> represents C1-4 alkyl; or
- (18) -OSO<sub>2</sub>R<sup>L</sup> wherein R<sup>L</sup> represents C1-4 alkyl, wherein these groups are  
optionally substituted as previously defined ~~in claim 1~~.

Claim 28 (Currently Amended) The compound according to claim 1 ~~any one of~~  
~~claims 1 to 27~~, wherein Z represents -O-.

Claim 29 (Currently Amended) The compound according to claim 1 ~~any one of~~  
~~claims 1 to 28~~, wherein X represents a carbon atom.

Claim 30 (Original) The compound according to claim 1 or a pharmaceutically  
acceptable salt or solvate thereof, wherein formula (I) is represented by formula (100):



wherein

Z represents -O-, -NH-, -S-, or -C(=O)-,

any one of D<sup>11</sup> and D<sup>12</sup> represents a nitrogen atom, and the other represents a carbon  
atom,

R<sup>103</sup> represents a hydrogen atom or a halogen atom,

R<sup>104</sup> and R<sup>105</sup>, which may be the same or different, represent

- (1) a hydrogen atom ;
- (2) a halogen atom;
- (3) hydroxyl;
- (6) C1-6 alkyl;
- (9) C1-6 alkoxy;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group; or

(16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group,

wherein these groups are optionally substituted as defined in claim 1,

R<sup>111</sup> and R<sup>112</sup>, which may be the same or different, are selected from the group consisting of a hydrogen atom, C1-4 alkyl, and C1-4 alkoxy, and

R<sup>114</sup> represents

(14'') a saturated or unsaturated five- or six-membered carbocyclic group;

(15'') a saturated or unsaturated five- or six-membered heterocyclic group; or

(16'') a bicyclic saturated or unsaturated nine- or ten-membered carbocyclic or heterocyclic group;

wherein (14'') carbocyclic group, (15'') heterocyclic group, and (16'') bicyclic carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

Claim 31 (Original) The compound according to claim 30, wherein Z represents -O-.

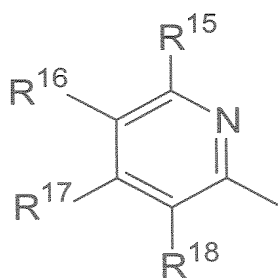
Claim 32 (Currently Amended) The compound according to claim 30 ~~or 31~~, wherein  $R^{103}$  represents a hydrogen atom.

Claim 33 (Currently Amended) The compound according to claim 30 ~~any one of claims 30 to 32~~, wherein

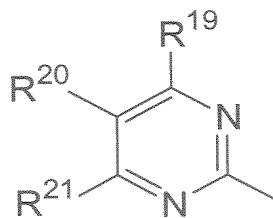
both  $R^{111}$  and  $R^{112}$  represent methyl, or

$R^{111}$  represents a hydrogen atom, and  $R^{112}$  represents ethyl.

Claim 34 (Currently Amended) The compound according to claim 30 ~~any one of claims 30 to 33~~, wherein  $R^{114}$  represents a group of formula (a-4) or (a-5):



(a-4)



(a-5)

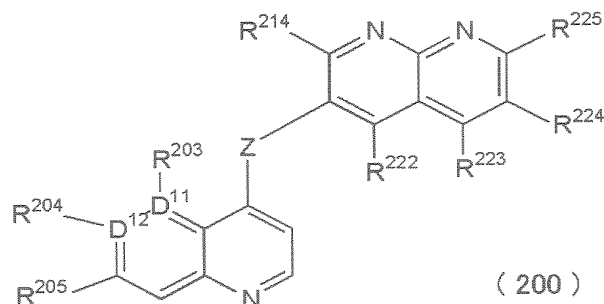
wherein

$R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$ , which may be the same or different, are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 35 (Original) The compound according to claim 34, wherein all of  $R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$  represent a hydrogen atom.

Claim 36 (Currently Amended) The compound according to claim 30 ~~any one of claims 30 to 35~~, wherein both  $R^{104}$  and  $R^{105}$  represent a hydrogen atom.

Claim 37 (Currently Amended) The compound according to claim 1 or a pharmaceutically acceptable salt or solvate thereof, wherein formula (I) is represented by formula (200):



wherein

Z represents -O-, -NH-, -S-, or -C(=O)-,

any one of D<sup>11</sup> and D<sup>12</sup> represents a nitrogen atom, and the other represents a carbon atom,

R<sup>203</sup> represents a hydrogen atom or a halogen atom,

R<sup>204</sup> and R<sup>205</sup>, which may be the same or different, represent

- (1) a hydrogen atom ;
- (2) a halogen atom;
- (3) hydroxyl;
- (6) C1-6 alkyl;
- (9) C1-6 alkoxy;
- (12) -CO-OR<sup>c</sup>;
- (13) -CO-NR<sup>d</sup>R<sup>e</sup>;
- (14) a saturated or unsaturated three- to nine-membered carbocyclic group;
- (15) a saturated or unsaturated three- to nine-membered heterocyclic group; or
- (16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group,

wherein these groups are optionally substituted as defined in claim 1, ~~claim 1~~),  
R<sup>222</sup> to R<sup>225</sup>, which may be the same or different, are selected from the group  
consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy, and  
R<sup>214</sup> represents  
unsubstituted C1-4 alkyl,  
an optionally substituted unsaturated six-membered carbocyclic or  
heterocyclic group, or  
an optionally substituted, bicyclic saturated or unsaturated nine- or ten-  
membered carbocyclic or heterocyclic group.

Claim 38 (Original) The compound according to claim 37, wherein Z represents -O-.

Claim 39 (Currently Amended) The compound according to claim 37 ~~or 38~~, wherein  
R<sup>203</sup> represents a hydrogen atom.

Claim 40 (Currently Amended) The compound according to claim 37 ~~any one of~~  
~~claims 37 to 39~~, wherein all of R<sup>222</sup> to R<sup>225</sup> represent a hydrogen atom.

Claim 41 (Currently Amended) The compound according to claim 37 ~~any one of~~  
~~claims 37 to 40~~, wherein R<sup>214</sup> represents phenyl.

Claim 42 (Currently Amended) The compound according to claim 37 ~~any one of~~  
~~claims 37 to 40~~, wherein R<sup>214</sup> represents methyl or ethyl.

Claim 43 (Currently Amended) The compound according to claim 37 ~~any one of claims 37 to 42~~, wherein both R<sup>204</sup> and R<sup>205</sup> represent a hydrogen atom.

Claim 44 (Original) The compound according to claim 1, wherein  
all of D<sup>1</sup> to D<sup>4</sup> represent a carbon atom,  
R<sup>1</sup> and R<sup>2</sup> represent a hydrogen atom, and  
R<sup>3</sup> and R<sup>6</sup>, which may be the same or different, represent a hydrogen atom, a halogen atom, or C1-4 alkyl, and

R<sup>4</sup> and R<sup>5</sup>, which may be the same or different, represent

(4) cyano group;

(5) nitro group;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

wherein, in groups (12) and (13), R<sup>c</sup>, R<sup>d</sup>, and R<sup>e</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl, provided that at least one of R<sup>d</sup> and R<sup>e</sup> represents C1-4 alkyl, and the C1-4 alkyl group is optionally substituted by

(a) hydroxyl,

(b) a halogen atom,

(c) C1-4 alkoxy,

(d) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or

(e) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl,

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group; or

(16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group,

wherein (14) carbocyclic group, (15) heterocyclic group, and (16) bicyclic carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and (15) heterocyclic group contain at least one substituent.

Claim 45 (Original) The compound according to claim 44, wherein

R<sup>4</sup> and R<sup>5</sup> represent

an unsaturated five- or six-membered carbocyclic or heterocyclic group wherein the carbocyclic or heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, a halogen atom, amino group, or hydroxyl, or

a bicyclic unsaturated nine- or ten-membered carbocyclic or heterocyclic group wherein the carbocyclic or heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, a halogen atom, amino group, or hydroxyl.

Claim 46 (Currently Amended) The compound according to claim 44 ~~or 45~~, wherein L represents a nitrogen atom, and E, G, J, and M represent a carbon atom.

Claim 47 (Currently Amended) The compound according to claim 44 ~~any one of claims 44 to 46~~, wherein

R<sup>14</sup> represents

(6) C1-6 alkyl;

wherein the alkyl group is optionally substituted as previously defined;

~~defined in claim 1,~~

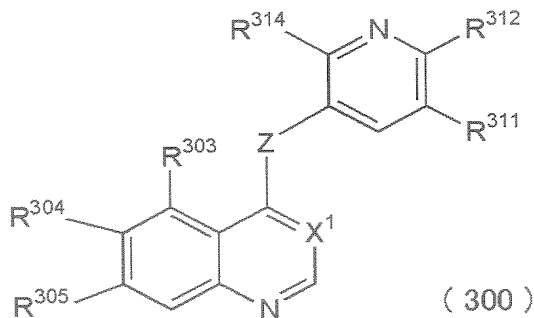
(14'') a saturated or unsaturated five- or six-membered carbocyclic group;

(15'') a saturated or unsaturated five- or six-membered heterocyclic group; or

(16'') a bicyclic saturated or unsaturated nine- or ten-membered carbocyclic or heterocyclic group;

wherein (14'') carbocyclic group, (15'') heterocyclic group, and (16'') bicyclic carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

Claim 48 (Original) The compound according to claim 1 or a pharmaceutically acceptable salt or solvate thereof, wherein formula (I) is represented by formula (300):



wherein

X<sup>1</sup> represents CH or N,

Z represents -O-, -NH-, -S-, or -C(=O)-,

$R^{303}$  represents a hydrogen atom, a halogen atom, or C1-4 alkyl,

$R^{304}$  and  $R^{305}$ , which may be the same or different, represent

- (1) a hydrogen atom;
- (2) a halogen atom;
- (3) hydroxyl;
- (6) C1-6 alkyl;
- (9) C1-6 alkoxy;
- (12)  $-\text{CO}-\text{OR}^c$ ;
- (13)  $-\text{CO}-\text{NR}^d\text{R}^e$ ;
- (14) a saturated or unsaturated three- to nine-membered carbocyclic group;
- (15) a saturated or unsaturated three- to nine-membered heterocyclic group;
- (16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic

or heterocyclic group;

(17)  $-\text{OCOR}^k$  wherein  $R^k$  represents C1-4 alkyl; or

(18)  $-\text{OSO}_2\text{R}^L$  wherein  $R^L$  represents C1-4 alkyl,

wherein these groups are optionally substituted as defined in claim 1,

at least one of  $R^{311}$  and  $R^{312}$  represents C1-4 alkyl and the other represents a hydrogen atom or C1-4 alkyl, and

$R^{314}$  represents an unsaturated six-membered heterocyclic group wherein the heterocyclic group is optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi)  $-\text{CO}-\text{OR}^f$ , or (xii)  $-\text{CO}-\text{NR}^g\text{R}^h$  wherein  $R^f$ ,  $R^g$ , and  $R^h$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

Claim 49 (Currently Amended) The compound according to claim 48, wherein

Z represents -O-,

R<sup>303</sup> represents a hydrogen atom, and

R<sup>304</sup> represents

(1) a hydrogen atom ;

(2) a halogen atom;

(3) hydroxyl;

(9) C1-6 alkoxy;

(17) -OCOR<sup>k</sup> wherein R<sup>k</sup> represents C1-4 alkyl; or

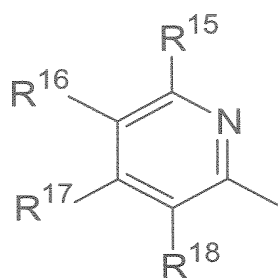
(18) -OSO<sub>2</sub>R<sup>L</sup> wherein R<sup>L</sup> represents C1-4 alkyl,

wherein these groups are optionally substituted as previously defined ~~in claim~~

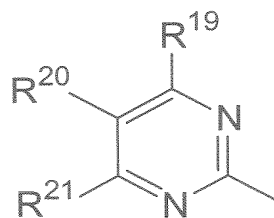
4,

R<sup>305</sup> represents a hydrogen atom, a halogen atom, or -CO-NH<sub>2</sub>, and

R<sup>314</sup> represents a group of formula (a-4) or (a-5):



(a-4)



(a-5)

wherein

R<sup>15</sup> to R<sup>18</sup> and R<sup>19</sup> to R<sup>21</sup>, which may be the same or different, are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 50 (Original) The compound according to claim 49, wherein R<sup>15</sup> to R<sup>18</sup> and R<sup>19</sup> to R<sup>21</sup> represent a hydrogen atom.

Claim 51 (Currently Amended) The compound according to claim 48 ~~any one of~~  
~~claims 48 to 50~~, wherein  $X^1$  represents CH.

Claim 52 (Currently Amended) The compound according to claim 48 ~~any one of~~  
~~claims 48 to 51~~, wherein  $R^{305}$  represents a hydrogen atom, a fluorine atom, or -CO-NH<sub>2</sub>.

Claim 53 (Currently Amended) The compound according to claim 48 ~~any one of~~  
~~claims 48 to 52~~, wherein  $R^{311}$  and  $R^{312}$ , which may be the same or different, represent C1-4  
alkyl.

Claim 54 (Original) The compound according to claim 53, wherein both  $R^{311}$  and  
 $R^{312}$  represent methyl.

Claim 55 (Currently Amended) The compound according to claim 48 ~~any one of~~  
~~claims 48 to 52~~, wherein

$R^{311}$  represents a hydrogen atom, and

$R^{312}$  represents C1-4 alkyl.

Claim 56 (Original) The compound according to claim 55, wherein

$R^{311}$  represents a hydrogen atom, and

$R^{312}$  represents methyl.

Claim 57 (Original) The compound according to claim 55, wherein

$R^{311}$  represents a hydrogen atom, and

$R^{312}$  represents ethyl.

Claim 58 (Currently Amended) The compound according to claim 48 ~~any one of claims 48 to 57~~, wherein  $R^{304}$  represents C1-6 alkoxy optionally substituted as previously defined in claim 1.

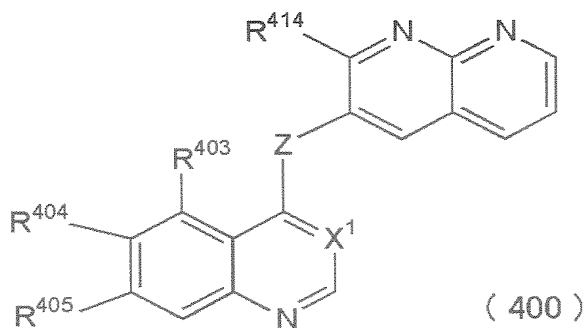
Claim 59 (Original) The compound according to claim 58, wherein  $R^{304}$  represents C1-6 alkoxy substituted by hydroxyl.

Claim 60 (Original) The compound according to claim 58, wherein  $R^{304}$  represents -  
 $O(CH_2)m_1-OH$  wherein  $m_1$  is an integer of 2 to 4.

Claim 61 (Original) The compound according to claim 58, wherein  $R^{304}$  represents -  
 $OC_2H_5-OH$ .

Claim 62 (Original) The compound according to claim 48, which is selected from the group consisting of compounds 181, 188, 192, 200, 202, and 205.

Claim 63 (Original) The compound according to claim 1 or a pharmaceutically acceptable salt or solvate thereof, wherein formula (I) is represented by formula (400):



wherein

$X^1$  represents CH or N,

Z represents -O-, -NH-, -S-, or -C(=O)-,

R<sup>403</sup> represents a hydrogen atom, a halogen atom, or C1-4 alkyl,

R<sup>404</sup> and R<sup>405</sup>, which may be the same or different, represent

(1) a hydrogen atom ;

(2) a halogen atom;

(3) hydroxyl;

(6) C1-6 alkyl;

(9) C1-6 alkoxy;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group;

(16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group;

(17) -OCOR<sup>k</sup> wherein R<sup>k</sup> represents C1-4 alkyl; or

(18) -OSO<sub>2</sub>R<sup>L</sup> wherein R<sup>L</sup> represents C1-4 alkyl,

wherein these groups are optionally substituted as defined in claim 1, and

R<sup>414</sup> represents

(6) C1-6 alkyl;

wherein the alkyl group is optionally substituted as defined in claim 1,

(14'') a saturated or unsaturated five- or six-membered carbocyclic group;

(15'') a saturated or unsaturated five- or six-membered heterocyclic group; or

(16'') a bicyclic saturated or unsaturated nine- or ten-membered carbocyclic or heterocyclic group;

wherein (14'') carbocyclic group, (15'') heterocyclic group, and (16'') bicyclic carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

Claim 64 (Original) The compound according to claim 63, wherein

Z represents -O-,

R<sup>403</sup> represents a hydrogen atom, and

R<sup>414</sup> represents

an unsaturated five- or six-membered carbocyclic or heterocyclic group wherein the carbocyclic or heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, a halogen atom, amino group, or hydroxyl, or

a bicyclic unsaturated nine- or ten-membered carbocyclic or heterocyclic group wherein the carbocyclic or heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, a halogen atom, amino group, or hydroxyl.

Claim 65 (Original) The compound according to claim 63, wherein

X<sup>1</sup> represents CH,

Z represents -O-,

R<sup>403</sup> represents a hydrogen atom,

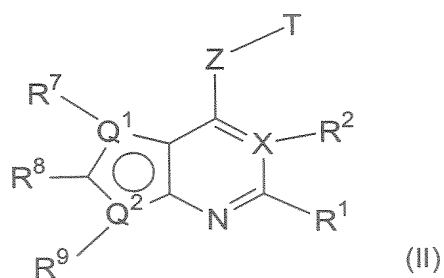
any one of R<sup>404</sup> and R<sup>405</sup> represents C1-4 alkoxy substituted by hydroxyl, and the other represents unsubstituted C1-4 alkoxy, and

R<sup>414</sup> represents phenyl.

Claim 66 (Original) The compound according to claim 63, which is compound 178.

Claim 67 (Original) The compound according to claim 1, which is selected from the group consisting of compounds 1 to 27, 30, 31, 37 to 70, 73, 74, 81 to 179, and 181 to 225.

Claim 68 (Original) A compound of formula (II) or a pharmaceutically acceptable salt or solvate thereof:



wherein

T represents a saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group,

wherein group T is optionally substituted by groups (2) to (16):

- (2) a halogen atom;
- (3) hydroxyl;
- (4) cyano group;
- (5) nitro group;
- (6) C1-6 alkyl;
- (7) C2-6 alkenyl;
- (8) C2-6 alkynyl;
- (9) C1-6 alkoxy;

(10) C1-6 alkylthio;

wherein (6) C1-6 alkyl, (7) C2-6 alkenyl, (8) C2-6 alkynyl, (9) C1-6 alkoxy, and (10) C1-6 alkylthio are optionally substituted by

(I) hydroxyl,

(II) a halogen atom,

(III) C1-4 alkoxy,

(IV) an oxygen atom,

(V) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or

(VI) amino group wherein one or two hydrogen atoms in the amino group are optionally substituted by C1-4 alkyl, and the C1-4 alkyl group is optionally substituted by hydroxyl or C1-4 alkoxy,

(11) -NR<sup>a</sup>R<sup>b</sup>;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

wherein, in groups (11) to (13), R<sup>a</sup>, R<sup>b</sup>, R<sup>c</sup>, R<sup>d</sup>, and R<sup>e</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and the C1-4 alkyl group is optionally substituted by

(a) hydroxyl,

(b) a halogen atom,

(c) C1-4 alkoxy,

(d) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or

(e) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, and

$R^d$  and  $R^e$  together may combine with the carbon atoms to which they are attached represent a saturated three- to nine-membered heterocyclic group wherein the heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom and may further contain one or more additional heteroatoms;

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group; or

(16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group,

wherein (14) carbocyclic group, (15) heterocyclic group, and (16) bicyclic carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi)  $-\text{CO}-\text{OR}^f$ , or (xii)  $-\text{CO}-\text{NR}^g\text{R}^h$  wherein  $R^f$ ,  $R^g$ , and  $R^h$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl,

two adjacent substituents on group T together may combine with the carbon atoms to which they are attached represent a saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group, and the carbocyclic or heterocyclic group is optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi)  $-\text{CO}-\text{OR}^f$ , or (xii)  $-\text{CO}-\text{NR}^g\text{R}^h$  wherein  $R^f$ ,  $R^g$ , and  $R^h$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl,

$Q^1$  and  $Q^2$ , which may be the same or different, represent C, S, O, or N,

X represents C or N,

Z represents -O-, -N(-R<sup>Z</sup>)-, -S-, or -C(=O)- wherein R<sup>Z</sup> represents a hydrogen atom or unsubstituted C1-4 alkyl,

R<sup>1</sup>, R<sup>2</sup>, and R<sup>7</sup> to R<sup>9</sup>, which may be the same or different, represent,

- (1) a hydrogen atom;
- (2) a halogen atom;
- (3) hydroxyl;
- (4) cyano group;
- (5) nitro group;
- (6) C1-6 alkyl;
- (7) C2-6 alkenyl;
- (8) C2-6 alkynyl;
- (9) C1-6 alkoxy;
- (10) C1-6 alkylthio;

wherein (6) C1-6 alkyl, (7) C2-6 alkenyl, (8) C2-6 alkynyl, (9) C1-6 alkoxy, and (10) C1-6 alkylthio are optionally substituted by

- (I) hydroxyl,
- (II) a halogen atom,
- (III) C1-4 alkoxy,
- (IV) an oxygen atom,
- (V) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or
- (VI) amino group wherein one or two hydrogen atoms in the amino

group are optionally substituted by C1-4 alkyl, and the C1-4 alkyl group is optionally substituted by hydroxyl or C1-4 alkoxy;

- (11) -NR<sup>a</sup>R<sup>b</sup>;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

wherein, in groups (11) to (13), R<sup>a</sup>, R<sup>b</sup>, R<sup>c</sup>, R<sup>d</sup>, and R<sup>e</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and C1-4 alkyl is optionally substituted by

(a) hydroxyl,

(b) a halogen atom,

(c) C1-4 alkoxy,

(d) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or

(e) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, and

R<sup>d</sup> and R<sup>e</sup> together may combine with the carbon atoms to which they are attached represent a saturated three- to nine-membered heterocyclic group, and the heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom and may contain one or more additional heteroatoms;

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group; or

(16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group,

wherein (14) carbocyclic group, (15) heterocyclic group, and (16) bicyclic carbocyclic or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-

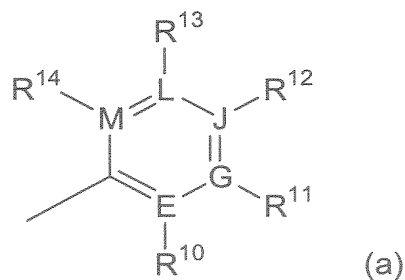
$\text{NR}^g\text{R}^h$  wherein  $\text{R}^f$ ,  $\text{R}^g$ , and  $\text{R}^h$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and

the five-membered ring part containing  $\text{Q}^1$  and  $\text{Q}^2$  in formula (II) represents an aromatic ring,

provided that, when X represents a nitrogen atom,  $\text{R}^2$  is absent, and

when  $\text{Q}^1$  and  $\text{Q}^2$  represent an oxygen atom or a sulfur atom,  $\text{R}^7$  and  $\text{R}^9$  which attach to the oxygen atom or the sulfur atom are absent, and, when both  $\text{Q}^1$  and  $\text{Q}^2$  represent a nitrogen atom, any one of  $\text{R}^7$  and  $\text{R}^9$  is absent.

Claim 69 (Original) The compound according to claim 68, wherein T represents a group of formula (a):



wherein

E, G, J, L, and M, which may be the same or different, represent C or N, and

$\text{R}^{10}$  to  $\text{R}^{14}$ , which may be the same or different, represent

- (1) a hydrogen atom;
- (2) a halogen atom;
- (3) hydroxyl;
- (4) cyano group;
- (5) nitro group;
- (6) C1-6 alkyl;

(7) C2-6 alkenyl;

(8) C2-6 alkynyl;

(9) C1-6 alkoxy;

(10) C1-6 alkylthio;

wherein (6) C1-6 alkyl, (7) C2-6 alkenyl, (8) C2-6 alkynyl, (9) C1-6 alkoxy, and (10) C1-6 alkylthio are optionally substituted by

(I) hydroxyl,

(II) a halogen atom,

(III) C1-4 alkoxy,

(IV) an oxygen atom,

(V) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or

(VI) amino group wherein one or two hydrogen atoms in the amino group are optionally substituted by C1-4 alkyl, and the C1-4 alkyl group is optionally substituted by hydroxyl or C1-4 alkoxy;

(11) -NR<sup>a</sup>R<sup>b</sup>;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

wherein, in groups (11) to (13), R<sup>a</sup>, R<sup>b</sup>, R<sup>c</sup>, R<sup>d</sup>, and R<sup>e</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and the C1-4 alkyl group is optionally substituted by,

(a) hydroxyl,

(b) a halogen atom,

(c) C1-4 alkoxy,

(d) a saturated or unsaturated three- to nine-membered carbocyclic or heterocyclic group optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom, or

(e) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, and

$R^d$  and  $R^e$  together may combine with the carbon atoms to which they are attached represent a saturated three- to nine-membered heterocyclic group, and the heterocyclic group is optionally substituted by C1-4 alkyl, C1-4 alkoxy, or a halogen atom and may contain one or more additional heteroatoms;

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group; or

(16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group;

wherein (14) carbocyclic group, (15) heterocyclic group, and (16) bicyclic carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi)  $-\text{CO}-\text{OR}^f$ , or (xii)  $-\text{CO}-\text{NR}^g\text{R}^h$  wherein  $R^f$ ,  $R^g$ , and  $R^h$ , which may be the same or different, represent a hydrogen atom or C1-4 alkyl, and

$R^{10}$  and  $R^{11}$ ,  $R^{11}$  and  $R^{12}$ ,  $R^{12}$  and  $R^{13}$ , and  $R^{13}$  and  $R^{14}$  together may combine with the carbon atoms to which they are attached represent a saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group, and the carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl,

(ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl, provided that, when E, G, J, L, and M represent a nitrogen atom, R<sup>10</sup> to R<sup>14</sup> which attach to the nitrogen atom are absent.

Claim 70 (Currently Amended) The compound according to claim 68 ~~or 69~~, wherein Q<sup>1</sup> represents a sulfur atom, and Q<sup>2</sup> represents a carbon atom.

Claim 71 (Currently Amended) The compound according to claim 68 ~~or 69~~, wherein Q<sup>1</sup> represents a carbon atom, and Q<sup>2</sup> represents a sulfur atom.

Claim 72 (Currently Amended) The compound according to claim 69 ~~any one of claims 69 to 71~~, wherein, in the group of formula (a), any one of E, G, J, L, and M represents a nitrogen atom, and all the others represent a carbon atom.

Claim 73 (Original) The compound according to claim 72, wherein L represents a nitrogen atom, and E, G, J, and M represent a carbon atom.

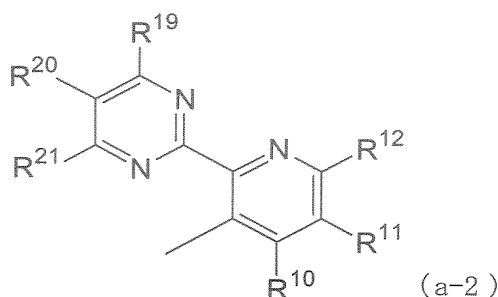
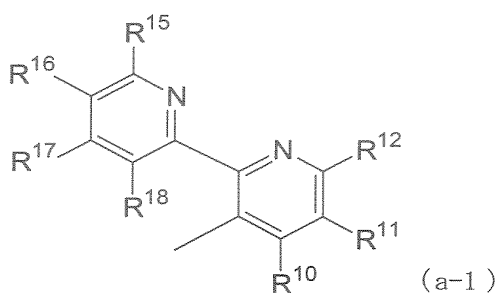
Claim 74 (Currently Amended) The compound according to claim 69 ~~any one of claims 69 to 73~~, wherein

R<sup>10</sup> represents a hydrogen atom, and

R<sup>11</sup> and R<sup>12</sup> are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 75 (Currently Amended) The compound according to claim 69 ~~any one of claims 69 to 74~~, wherein R<sup>14</sup> represents an optionally substituted unsaturated six-membered heterocyclic group.

Claim 76 (Currently Amended) The compound according to claim 69 ~~any one of claims 69 to 75~~, wherein T represents a group of formula (a-1) or (a-2):



wherein

R<sup>10</sup> to R<sup>12</sup> are as defined in claim 69,

R<sup>15</sup> to R<sup>18</sup> and R<sup>19</sup> to R<sup>21</sup>, which may be the same or different, represent (i) a hydrogen atom, (ii) hydroxyl, (iii) a halogen atom, (iv) cyano group, (v) nitro group, (vi) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vii) C1-4 alkyl, (viii) C2-4 alkenyl, (ix) C2-4 alkynyl, (x) C1-4 alkoxy, (xi) C1-4 alkylthio, (xii) -CO-OR<sup>f</sup>, or (xiii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

Claim 77 (Original) The compound according to claim 76, wherein, in a group of formula (a-1) or (a-2), R<sup>15</sup> to R<sup>18</sup> and R<sup>19</sup> to R<sup>21</sup> are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 78 (Original) The compound according to claim 76, wherein

R<sup>10</sup> represents a hydrogen atom,

R<sup>11</sup> and R<sup>12</sup> are selected from the group consisting of a hydrogen atom and C1-4 alkyl, and, in the group of formula (a-1) or (a-2), R<sup>15</sup> to R<sup>18</sup> and R<sup>19</sup> to R<sup>21</sup> are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 79 (Original) The compound according to claim 76, wherein

R<sup>10</sup> represents a hydrogen atom,

R<sup>11</sup> and R<sup>12</sup> are selected from the group consisting of a hydrogen atom and C1-4 alkyl, and, in the group of formula (a-1) or (a-2), all of R<sup>15</sup> to R<sup>18</sup> and R<sup>19</sup> to R<sup>21</sup> represent a hydrogen atom.

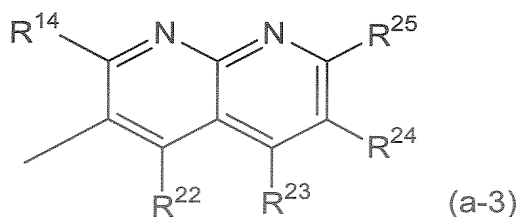
Claim 80 (Currently Amended) The compound according to claim 76 ~~any one of claims 76 to 79~~, wherein

R<sup>10</sup> represents a hydrogen atom, and

R<sup>11</sup> and R<sup>12</sup> together combine with the carbon atoms to which they are attached represent a saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group.

Claim 81 (Original) The compound according to claim 80, wherein R<sup>11</sup> and R<sup>12</sup> together combine with the carbon atoms to which they are attached represent a unsaturated six-membered carbocyclic or heterocyclic group.

Claim 82 (Currently Amended) The compound according to claim 76 ~~any one of claims 76 to 79~~, wherein T represents a group of formula (a-3):



wherein

$R^{14}$  is as previously defined ~~in claim 69~~,

$R^{22}$  to  $R^{25}$ , which may be the same or different, represent (i) a hydrogen atom, (ii) a hydroxyl, (iii) a halogen atom, (iv) cyano group, (v) nitro group, (vi) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vii) C1-4 alkyl, (viii) C2-4 alkenyl, (ix) C2-4 alkynyl, (x) C1-4 alkoxy, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

Claim 83 (Original) The compound according to claim 82, wherein, in the group of formula (a-3),  $R^{22}$  to  $R^{25}$  are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 84 (Original) The compound according to claim 82, wherein, in the group of formula (a-3), all of  $R^{22}$  to  $R^{25}$  represent a hydrogen atom.

Claim 85 (Currently Amended) The compound according to claim 82 ~~any one of claims 82 to 84~~, wherein

$R^{14}$  represents

optionally substituted C1-4 alkyl,

an optionally substituted saturated or unsaturated five- or six-membered carbocyclic or heterocyclic group, or

an optionally substituted bicyclic saturated or unsaturated nine- or ten-membered carbocyclic or heterocyclic group.

Claim 86 (Original) The compound according to claim 85, wherein R<sup>14</sup> represents unsubstituted C1-4 alkyl.

Claim 87 (Original) The compound according to claim 85, wherein R<sup>14</sup> represents an optionally substituted unsaturated six-membered carbocyclic or heterocyclic group.

Claim 88 (Currently Amended) The compound according to claim 68 ~~any one of claims 68 to 87~~, wherein X represents a carbon atom and both R<sup>1</sup> and R<sup>2</sup> represent a hydrogen atom.

Claim 89 (Currently Amended) The compound according to claim 68 ~~any one of claims 68 to 88~~, wherein Q<sup>1</sup> represents a sulfur atom, Q<sup>2</sup> represents a carbon atom, and R<sup>9</sup> represents a hydrogen atom.

Claim 90 (Currently Amended) The compound according to claim 68 ~~any one of claims 68 to 88~~, wherein Q<sup>1</sup> represents a carbon atom, Q<sup>2</sup> represents a sulfur atom, and R<sup>7</sup> represents a hydrogen atom.

Claim 91 (Currently Amended) The compound according to claim 68 ~~any one of claims 68 to 90~~, wherein both R<sup>1</sup> and R<sup>2</sup> represent a hydrogen atom.

Claim 92 (Currently Amended) The compound according to claim 68 ~~any one of claims 68 to 91~~, wherein

$R^7$  to  $R^9$ , which may be the same or different, represent

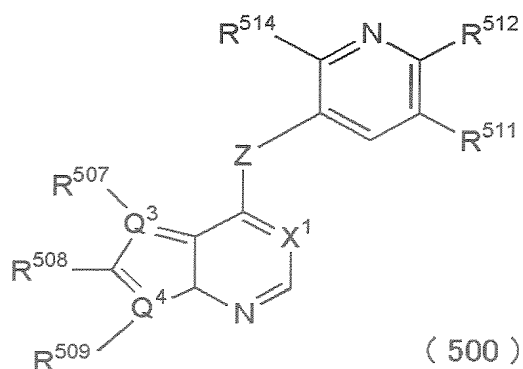
- (1) a hydrogen atom ;
- (2) a halogen atom;
- (3) hydroxyl;
- (6) C1-6 alkyl;
- (9) C1-6 alkoxy;
- (14) a saturated or unsaturated three- to nine-membered carbocyclic group;
- (15) a saturated or unsaturated three- to nine-membered heterocyclic group; or
- (16) a bicyclic saturated or unsaturated eight- to twelve-membered carbocyclic or heterocyclic group,

wherein these groups are optionally substituted as defined in claim 68.

Claim 93 (Currently Amended) The compound according to claim 68 ~~any one of claims 68 to 92~~, wherein Z represents -O-.

Claim 94 (Currently Amended) The compound according to claim 68 ~~any one of claims 68 to 93~~, wherein X represents a carbon atom.

Claim 95 (Currently Amended) The compound according to claim 68 or a pharmaceutically acceptable salt or solvate thereof, wherein formula (II) ~~formula (I)~~ is represented by formula (500):



wherein

X<sup>1</sup> represents CH or N,

Z represents -O-, -NH-, -S-, or -C(=O)-,

any one of Q<sup>3</sup> and Q<sup>4</sup> represents a sulfur atom, and the other represents a carbon atom,

R<sup>507</sup> to R<sup>509</sup>, which may be the same or different, represent

- (1) a hydrogen atom ;
- (2) a halogen atom;
- (3) hydroxyl;
- (6) C1-6 alkyl;
- (9) C1-6 alkoxy;
- (12) -CO-OR<sup>c</sup>;
- (13) -CO-NR<sup>d</sup>R<sup>e</sup>;
- (14) a saturated or unsaturated three- to nine-membered carbocyclic group;
- (15) a saturated or unsaturated three- to nine-membered heterocyclic group; or
- (16) a bicyclic saturated or unsaturated eight- to twelve-membered

carbocyclic or heterocyclic group

wherein these groups are optionally substituted as defined in claim 68,

R<sup>511</sup> and R<sup>512</sup>, which may be the same or different, are selected from the group consisting of a hydrogen atom and C1-4 alkyl,

R<sup>514</sup> represents

(14'') a saturated or unsaturated five- or six-membered carbocyclic group;

(15'') a saturated or unsaturated five- or six-membered heterocyclic group; or

(16'') a bicyclic saturated or unsaturated nine- or ten-membered carbocyclic or heterocyclic group;

wherein (14'') carbocyclic group, (15'') heterocyclic group, and (16'') bicyclic carbocyclic group or heterocyclic group are optionally substituted by (i) hydroxyl, (ii) a halogen atom, (iii) cyano group, (iv) nitro group, (v) amino group wherein one or two hydrogen atoms in the amino groups are optionally substituted by C1-4 alkyl, (vi) C1-4 alkyl, (vii) C2-4 alkenyl, (viii) C2-4 alkynyl, (ix) C1-4 alkoxy, (x) C1-4 alkylthio, (xi) -CO-OR<sup>f</sup>, or (xii) -CO-NR<sup>g</sup>R<sup>h</sup> wherein R<sup>f</sup>, R<sup>g</sup>, and R<sup>h</sup>, which may be the same or different, represent a hydrogen atom or C1-4 alkyl.

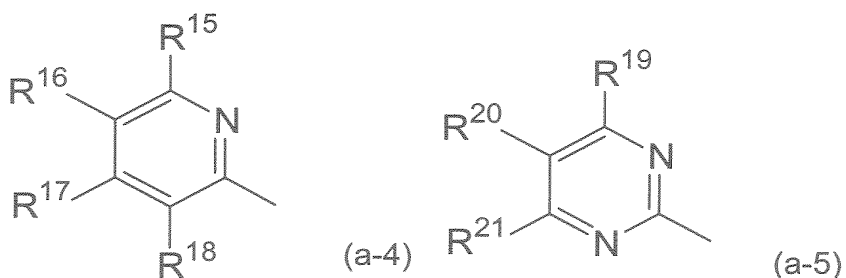
Claim 96 (Original) The compound according to claim 95, wherein Q<sup>3</sup> represents a sulfur atom, and Q<sup>4</sup> represents a carbon atom.

Claim 97 (Original) The compound according to claim 95, wherein Q<sup>3</sup> represents a carbon atom, and Q<sup>4</sup> represents a sulfur atom.

Claim 98 (Currently Amended) The compound according to claim 95 ~~any one of claims 95 to 97~~, wherein Z represents -O-.

Claim 99 (Currently Amended) The compound according to claim 95 ~~any one of claims 95 to 98~~, wherein both R<sup>511</sup> and R<sup>512</sup> represent methyl, or R<sup>511</sup> represents a hydrogen atom while R<sup>512</sup> represents ethyl.

Claim 100 (Currently Amended) The compound according to claim 95 ~~any one of claims 95 to 99~~, wherein  $R^{514}$  represents a group of formula (a-4) or formula (a-5):



wherein

$R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$ , which may be the same or different, are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy.

Claim 101 (Original) The compound according to claim 100, wherein all of  $R^{15}$  to  $R^{18}$  and  $R^{19}$  to  $R^{21}$  represent a hydrogen atom.

Claim 102 (Currently Amended) The compound according to claim 95 ~~any one of claims 95 and 98 to 101~~, wherein

$Q^3$  represents a sulfur atom,

$Q^4$  represents a carbon atom,

$R^{508}$  represents

a hydrogen atom,

C1-4 alkyl, or

a saturated or unsaturated six-membered carbocyclic or heterocyclic group,

wherein said carbocyclic or heterocyclic group is optionally substituted by (i) hydroxyl, (ii) a halogen atom, (v') amino group, (vi') C1-2 alkyl, or (ix') C1-2 alkoxy, and

$R^{509}$  represents a hydrogen atom.

Claim 103 (Original) The compound according to claim 102, wherein R<sup>508</sup> represents a hydrogen atom or phenyl.

Claim 104 (Currently Amended) The compound according to claim 95 ~~any one of claims 95 and 98 to 101~~, wherein

Q<sup>3</sup> represents a carbon atom,

Q<sup>4</sup> represents a sulfur atom, and

R<sup>507</sup> and R<sup>508</sup> are selected from the group consisting of a hydrogen atom and C1-4 alkyl.

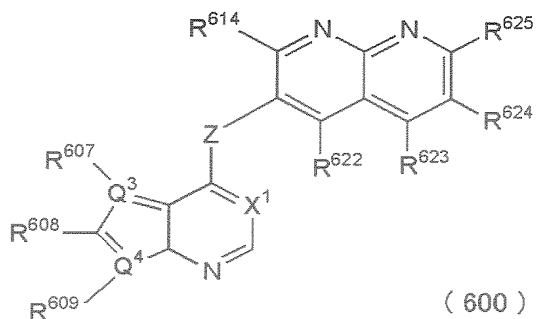
Claim 105 (Original) The compound according to claim 104, wherein

both R<sup>507</sup> and R<sup>508</sup> represent a hydrogen atom or

both R<sup>507</sup> and R<sup>508</sup> represent methyl or

R<sup>507</sup> represent methyl while R<sup>508</sup> represents a hydrogen atom.

Claim 106 (Currently Amended) The compound ~~of formula (I)~~ according to claim 69 or a pharmaceutically acceptable salt or solvate thereof, wherein formula (II) ~~formula (I)~~ is represented by formula (600):



wherein

X<sup>1</sup> represents CH or N,

Z represents -O-, -NH-, -S-, or -C(=O)-,

any one of Q<sup>3</sup> and Q<sup>4</sup> represents a sulfur atom, and the other represents a carbon atom,

R<sup>607</sup> to R<sup>609</sup>, which may be the same or different, represent

(1) a hydrogen atom ;

(2) a halogen atom;

(3) hydroxyl;

(6) C1-6 alkyl;

(9) C1-6 alkoxy;

(12) -CO-OR<sup>c</sup>;

(13) -CO-NR<sup>d</sup>R<sup>e</sup>;

(14) a saturated or unsaturated three- to nine-membered carbocyclic group;

(15) a saturated or unsaturated three- to nine-membered heterocyclic group; or

(16) a bicyclic saturated or unsaturated eight- to twelve-membered

carbocyclic or heterocyclic group,

wherein these groups are optionally substituted as previously defined in claim

68,

R<sup>622</sup> to R<sup>625</sup>, which may be the same or different, are selected from the group consisting of a hydrogen atom, a halogen atom, C1-4 alkyl, and C1-4 alkoxy, and

R<sup>614</sup> represents

unsubstituted C1-4 alkyl,

an optionally substituted unsaturated six-membered carbocyclic or heterocyclic group, or

an optionally substituted bicyclic saturated or unsaturated nine- or ten-membered carbocyclic or heterocyclic group.

Claim 107 (Original) The compound according to claim 106, wherein Z represents -O-.

Claim 108 (Currently Amended) The compound according to claim 106 ~~or 107~~, wherein all of R<sup>622</sup> to R<sup>625</sup> represent a hydrogen atom.

Claim 109 (Currently Amended) The compound according to claim 106 ~~any one of claims 106 to 108~~, wherein R<sup>614</sup> represents phenyl.

Claim 110 (Currently Amended) The compound according to claim 106 ~~any one of claims 106 to 108~~, wherein R<sup>614</sup> represents methyl or ethyl.

Claim 111 (Currently Amended) The compound according to claim 106 ~~any one of claims 106 to 110~~, wherein

Q<sup>3</sup> represents a sulfur atom,

Q<sup>4</sup> represents a carbon atom,

R<sup>608</sup> represents

a hydrogen atom,

C1-4 alkyl, or

a saturated or unsaturated six-membered carbocyclic or heterocyclic group,

wherein said carbocyclic or heterocyclic group is optionally substituted by (i) hydroxyl, (ii) a halogen atom, (v') amino group, (vi') C1-2 alkyl, or (ix') C1-2 alkoxy, and

R<sup>609</sup> represents a hydrogen atom.

Claim 112 (Original) The compound according to claim 111, wherein

R<sup>608</sup> represents a hydrogen atom or phenyl.

Claim 113 (Currently Amended) The compound according to claim 106 ~~any one of claims 106 to 110~~, wherein

Q<sup>3</sup> represents a carbon atom,

Q<sup>4</sup> represents a sulfur atom, and

R<sup>607</sup> and R<sup>608</sup> are selected from the group consisting of a hydrogen atom and C1-4 alkyl.

Claim 114 (Original) The compound according to claim 113, wherein

both R<sup>607</sup> and R<sup>608</sup> represent a hydrogen atom or

both R<sup>607</sup> and R<sup>608</sup> represent methyl or

R<sup>607</sup> represents methyl while R<sup>608</sup> represents a hydrogen atom.

Claim 115 (Original) The compound according to claim 68, which is selected from the group consisting of compounds 28, 29, 32 to 35, 71, 72, 75 to 78, and 180.

Claim 116 (Currently Amended) A pharmaceutical composition, comprising a compound according to claim 1 ~~any one of claims 1 to 115~~ or a pharmaceutically acceptable salt or solvate thereof as an active component.

Claims 117-121 (Cancelled).

Claim 122 (Currently Amended) A TGF $\beta$  inhibitor comprising a compound according to claim 1 ~~any one of claims 1 to 115~~ or a pharmaceutically acceptable salt or solvate thereof as an active component.

Claim 123 (Currently Amended) A method for treating or preventing a disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically, said method comprising ~~the step of~~ administering a therapeutically or prophylactically effective amount of a compound according to claim 1 ~~any one of claims 1 to 115~~ or a pharmaceutically acceptable salt or solvate thereof to a patient requiring the treatment or prevention of the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically.

Claim 124 (Original) The method according to claim 123, wherein the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically is a disease involving organ or tissue fibrosis.

Claim 125 (Original) The method according to claim 123, wherein the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically is chronic renal disease, acute renal disease, hepatic fibrosis, cirrhosis, plumonary fibrosis, scleroderma, wound healing, arthritis, congestive cardiac disease, ulcer, ocular disorder, corneal problem, diabetic nephropathy, peritoneal sclerosis, arteriosclerosis, peritoneal adhesions, or subdermal adhesion.

Claim 126 (Original) The method according to claim 123, wherein the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically is a malignant tumor.

Claim 127 (Currently Amended) A method for amplifying cells, comprising ~~the step~~ of adding a compound according to claim 1 ~~any one of claims 1 to 115~~ or a pharmaceutically acceptable salt or solvate thereof, in an amount effective for promoting cell growth, to intended cells in vitro to amplify the cells.

Claim 128 (Original) The method according to claim 127, wherein said intended cells are hematopoietic stem cells.

Claim 129 (Currently Amended) A method for inhibiting the action of TGF $\beta$  on cells, comprising ~~the step of~~ applying an effective amount of a compound according to claim 1 ~~any one of claims 1 to 115~~ to cells present in vitro or in vivo.

Claims 130-135 (Cancelled).

Claim 136 (New) A pharmaceutical composition, comprising a compound according to claim 68 or a pharmaceutically acceptable salt or solvate thereof as an active component.

Claim 137 (New) A TGF $\beta$  inhibitor comprising a compound according to claim 68 or a pharmaceutically acceptable salt or solvate thereof as an active component.

Claim 138 (New) A method for treating or preventing a disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically, said method comprising administering a therapeutically or prophylactically effective amount of a compound according to claim 68 or a pharmaceutically acceptable salt or solvate thereof to a patient

requiring the treatment or prevention of the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically.

Claim 139 (New) The method according to claim 138, wherein the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically is a disease involving organ or tissue fibrosis.

Claim 140 (New) The method according to claim 138, wherein the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically is chronic renal disease, acute renal disease, hepatic fibrosis, cirrhosis, plumonary fibrosis, scleroderma, wound healing, arthritis, congestive cardiac disease, ulcer, ocular disorder, corneal problem, diabetic nephropathy, peritoneal sclerosis, arteriosclerosis, peritoneal adhesions, or subdermal adhesion.

Claim 141 (New) The method according to claim 138, wherein the disease for which TGF $\beta$  inhibition is effective therapeutically or prophylactically is a malignant tumor.

Claim 142 (New) A method for amplifying cells, comprising ~~the step of~~ adding a compound according to claim 68 or a pharmaceutically acceptable salt or solvate thereof, in an amount effective for promoting cell growth, to intended cells in vitro to amplify the cells.

Claim 143 (New) The method according to claim 142, wherein said intended cells are hematopoietic stem cells.

Claim 144 (New) A method for inhibiting the action of TGF $\beta$  on cells, comprising applying an effective amount of a compound according to claim 68 to cells present in vitro or in vivo.